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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,771	02/11/2004	George Kadlicko	04095-P0010A	3427
24126	7590	03/01/2006	EXAMINER	
ST. ONGE STEWARD JOHNSTON & REENS, LLC			LOPEZ, FRANK D	
986 BEDFORD STREET			ART UNIT	
STAMFORD, CT 06905-5619			PAPER NUMBER	
			3745	
DATE MAILED: 03/01/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/776,771	Applicant(s) KADLICKO, GEORGE	
	Examiner F. Daniel Lopez	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on December 12, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,2,4-24 and 43-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,2,4,5,7-24 and 43-54 is/are rejected.
- 7) ☐ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicant's arguments filed December 12, 2005, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 43-54 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by the added limitations that the "said convex abutments...roll across said end faces...and thereby inhibit relative sliding there between" (claim 43 last 4 lines).

Applicant argues that Thoma does not disclose a "pressure compensated flow control valve to maintain a predetermined flow of fluid as pressure at the ports varies". Applicant shows the pressure compensated flow control valve as a throttle valve (168, fig 17). If Applicant's throttle valve can maintain a predetermined flow, then the throttle valve of Thoma can do the same, and therefore meets the claimed limitations.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1, 2, 4, 5, 12 and 14-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Thoma (see discussion below).

Claim Rejections - 35 USC § 103

Claims 1, 2, 4, 5, 12, 14-17 and 20-24 are rejected under 35 U.S.C. § 103 as being unpatentable over Damtrew et al in view of Thoma. Damtrew et al discloses a rotary hydraulic machine comprising a plurality of pistons (30) slidable in cylinders formed in a rotatable barrel (18); a swash plate (38) having a planer face engaged by the pistons; a bearing assembly (40) for supporting the swash plate for rotation about an axis in a housing; a pair of motors engaging respective ones of a pair of convex abutments, formed by cylindrical pins (60, 68) received in part cylindrical bores and protruding from the planer face, on opposite sides of the axis of rotation, to adjust its angle and thereby vary the stroke of the pistons; wherein the motors each include a

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working piston (52, 62) slidably received in a cylinder (56, 64), such that the cylinder engages with a respective one of the abutments; a fluid bearing between complementary surfaces of a housing and swash plate, for supporting the swash plate for rotation about an axis in a housing; wherein the fluid bearing (including 72, 74) is supplied with fluid from a source; but does not disclose that the fluid bearing is supplied with fluid from one of inlet and outlet ports feeding the plurality of pistons, by a flow control valve pressure compensated to maintain a predetermined rate of flow.

Thoma teaches, for a rotary hydraulic machine comprising a plurality of pistons (K) slidable in cylinders formed in a rotatable barrel (Z); inlet and outlet ports feeding the plurality of pistons; a swash plate (KW) having a planer face engaged by the pistons; a fluid bearing between complementary surfaces of a housing and swash plate, for supporting the swash plate for rotation about an axis in a housing; wherein the fluid bearing (including 72, 74) is supplied with fluid from a source; that the source of fluid supplied to the bearings is one of the inlet and outlet ports, via a flow control valve (k, fig 3) pressure compensated to maintain a predetermined rate of flow (through throttle DN when pressure is high enough).

Since Damtrew et al does not show the source of fluid for the fluid bearings and Thoma does; it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the source of fluid supplied to the bearings of Damtrew et al one of the inlet and outlet ports, via a flow control valve pressure compensated to maintain a predetermined rate of flow, as taught by Thoma, as a matter of engineering expediency.

Claims 43-47, 53 and 54 are rejected under 35 U.S.C. § 103 as being unpatentable over Damtrew et al in view of Blasutta. Damtrew et al discloses all of the elements of claims 43-47, 53 and 54, as discussed in the above rejection; but does not disclose that the abutments roll across the end faces, thereby inhibiting relative sliding there between.

Blasutta teaches, for a rotary hydraulic machine comprising a plurality of pistons (46) slidable in cylinders formed in a rotatable barrel (43); a swash plate (58) having a planer face engaged by the pistons; a bearing assembly (62, 64) for supporting the swash plate for rotation about an axis in a housing; a pair of motors have end faces which engage respective ones of a pair of convex abutments, formed by cylindrical pins (75, 79) received in part cylindrical bores, on opposite sides of the axis of rotation, to adjust its angle and thereby vary the stroke of the pistons; wherein the motors each include a working piston (73, 80) slidably received in a cylinder (70, 81); with end faces of the pistons engaging respective ones of the abutments; that the abutments are mounted on pins (77), such that the abutments roll across the end faces, for the purpose of eliminating friction between the end face and the swash plate (column 5 line 20-25).

Since Damtrew et al and Blasutta are both from the same field of endeavor, the purpose disclosed by Blasutta would have been recognized in the pertinent art of Damtrew et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to mount the abutments on pins, such that the abutments roll across the end faces of Damtrew et al, as taught by Blasutta, for the purpose of eliminating friction between the end face and the swash plate.

Claims 7-11, and 13 are rejected under 35 U.S.C. § 103 as being unpatentable over Damtrew et al in view of Thoma, as applied to claim 1 above, and further in view of Jepsen et al. Claims 48-52 are rejected under 35 U.S.C. § 103 as being unpatentable over Damtrew et al in view of Blasutta, as applied to claim 46 above, and further in view of Jepsen et al. Damtrew et al, as modified by Thoma and as modified by Blasutta, discloses all of the elements of claims 7-11, 13 and 48-52, respectively; but does not disclose that one of the complementary surfaces has a nylon coating, formulated from a type II polyamide resin, applied to reduce friction.

Jepsen et al teaches, for a rotary hydraulic machine comprising a plurality of pistons (4) slidable in cylinders formed in a rotatable barrel (3); a swash plate (8) having a planer face engaged by the pistons; a fluid bearing between complementary surfaces of a

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shoe (6) of the piston and the swash plate, that one of the complementary surfaces has a nylon (polyamide) coating (7, column 5 line 59-62), for the purpose of reducing friction.

Since Damtrew et al discloses a fluid bearing and Jepsen et al teaches coating a surface used as part of a fluid bearing; it would have been obvious at the time the invention was made to one having ordinary skill in the art to coat one of the complementary surfaces of Damtrew et al with a nylon coating, as taught by Jepsen et al, for the purpose of reducing friction

One of ordinary skill would recognize that there are various formulations for the nylon, including formulated from a type II polyamide resin. Therefore, It would have been obvious at the time the invention was made to one having ordinary skill in the art to formulated the nylon coating of Damtrew et al as a type II polyamide resin, as a matter of engineering expediency.

Claims 18 and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over in view of Damtrew et al in view of Okuda et al. Damtrew et al discloses all of the elements of claims 18 and 19, as discussed in the above rejection, including that a slipper is secured to the piston by a universal joint, and is maintained in contact with the planer surface by a retaining plate having apertures therein, with clamps securing the retaining plate to the swash plate; but does not disclose that the planer surface, engaged by the slippers, is provided by an annular insert located within a body of the swash plate.

Okuda et al teaches, for a rotary hydraulic machine comprising a plurality of pistons (12) slidable in cylinders formed in a rotatable barrel (4); a swash plate (8) having a planer face engaged by the pistons; with slippers (16), secured to respective pistons by a universal joint, and maintained in contact with the insert by a retaining plate having apertures therein; that the planer surface, engaged by the slippers, is provided by an annular insert (6) located within a body of the swash plate. One of ordinary skill in the rotary hydraulic machine art, would recognize that the purpose of providing an insert is to minimize the amount of bearing material used to rotatably support the slippers.

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Since Damtrew et al and Okuda et al are both from the same field of endeavor, the purpose disclosed by Okuda et al would have been recognized in the pertinent art of Damtrew et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to provide the planer surface of Damtrew et al, by an annular insert located within a body of the swash plate;, as taught by Okuda et al, for the purpose minimizing the amount of bearing material used to rotatably support the slippers.

Claims 43-46, 53 and 54 are rejected under 35 U.S.C. § 103 as being unpatentable over Bethke in view of Blasutta. Bethke discloses a rotary hydraulic machine comprising a plurality of pistons (23) slidable in cylinders formed in a rotatable barrel (20); a swash plate (28) having a planer face engaged by the pistons; a bearing assembly (303, 40) for supporting the swash plate for rotation about an axis in a housing; a pair of motors engaging, for part rolling motion and part sliding motion, respective ones of a pair of convex abutments, formed by cylindrical pins (60, 61) received in part cylindrical bores (see e.g. fig 3, as to how 61 is in a part cylindrical bore) and protruding from the planer face, on opposite sides of the axis of rotation, to adjust its angle and thereby vary the stroke of the pistons; wherein the motors each include a working piston slidably received in a cylinder (31, 32), such that the cylinder have end faces which engage with respective ones of the abutments; but does not disclose that the piston have end faces which engage with respective ones of the abutments, such that the abutments roll across the end faces, thereby inhibiting relative sliding therebetween; or that the cylinder is received in a bore of the housing.

Blasutta teaches, for a rotary hydraulic machine comprising a plurality of pistons (46) slidable in cylinders formed in a rotatable barrel (43); a swash plate (58) having a planer face engaged by the pistons; a bearing assembly (62, 64) for supporting the swash plate for rotation about an axis in a housing; a pair of motors have end faces which engage respective ones of a pair of convex abutments, formed by cylindrical pins (75, 79) received in part cylindrical bores, on opposite sides of the axis of rotation, to adjust its angle and thereby vary the stroke of the pistons; wherein the motors each

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include a working piston (73, 80) slidably received in a cylinder (70, 81); that the piston have the end faces which engages with a respective one of the abutments; that the cylinders are received in bores of the housing; and that the abutments are mounted on pins (77), such that the abutments roll across the end faces, wherein the abutments are mounted on pins, for the purpose of eliminating friction between the end face and the swash plate (column 5 line 20-25).

Since the motors of Bethke and Blasutta are functionally equivalent in the piston art; it would have been obvious at the time the invention was made to one having ordinary skill in the art to have respective ones of the abutments of Bethke engaged by the pistons, and have the cylinders received in bores of the housing, as taught by Blasutta, as a matter of engineering expediency; and to mount the abutments on pins, such that the abutments roll across the end faces of Bethke, as taught by Blasutta, for the purpose of eliminating friction between the end face and the swash plate.

Conclusion

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

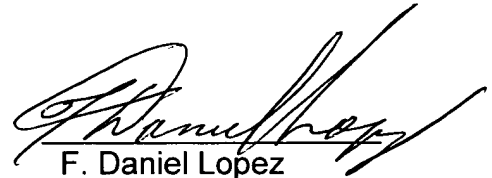
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571- 272-4821. The examiner can normally be reached on Monday-Thursday from 6:15 AM -3:45PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

A handwritten signature in black ink, appearing to read 'F. Daniel Lopez', is written over a horizontal line.

F. Daniel Lopez
Primary Examiner
Art Unit 3745
February 27, 2006